

Section XXVII
Childhood Cancer by Site
Incidence, Survival and Mortality

The site groupings used in this section correspond to those used in the rest of the Cancer Statistics Review. While these groupings are not as appropriate for children as they are for adults, they are necessary in order to be able to compare incidence to mortality.

Childhood cancer is better categorized by groupings based on histologic type and site rather than primary site alone (see section XXVIII for Childhood Cancer by the International Classification of Childhood Cancer). For the leukemias and lymphomas, the categories are similar, but for solid tumors the categories can be quite different and the different terminology confusing. For example, in this section 'soft tissue' refers to any type of tumor that arises in connective or soft tissue in contrast to 'soft tissue sarcomas' in the other section, which refers to soft tissue sarcomas in any primary site.

Rates are presented per 100,000 children in this section. In contrast in the other childhood cancer section rates are presented per million children.

Table XXVII-1

AGE-ADJUSTED SEER CANCER INCIDENCE TRENDS, 1975-2001, 1975-1986, 1987-2001^a

By Primary Cancer Site

All Races, Males and Females

Site	Ages 0-14				Ages 0-19			
	% Change 1975-2001	APC 1975-2001	APC 1975-1986	APC 1987-2001	% Change 1975-2001	APC 1975-2001	APC 1975-1986	APC 1987-2001
All Sites								
All Races	32.6	0.7 ^b	1.3 ^b	0.4 ^d	27.7	0.6 ^b	1.3 ^b	0.3 ^c
Whites	35.9	0.8 ^b	1.4 ^b	0.8 ^b	33.7	0.7 ^b	1.5 ^b	0.5 ^{bc}
Blacks	23.4	0.3	1.0	-1.2 ^{bc}	0.8	0.2	0.8	-1.0 ^{bc}
Bone & Joint	32.0	0.3	3.4 ^b	-0.3 ^d	25.9	0.3	2.6 ^b	-0.3 ^d
Brain & Other nervous	63.0	1.2 ^b	1.8	0.1	52.5	1.0 ^b	1.6	-0.1 ^d
Hodgkin lymphoma	-15.4	-1.1 ^b	-1.8	-1.1	-26.7	-0.8 ^b	-0.5	-1.8 ^b
Kidney & Renal pelvis	26.0	0.3	1.2	0.2	19.6	0.4	1.1	0.2
Leukemia	31.5	0.7 ^b	1.5 ^b	0.3	25.8	0.6 ^b	1.4 ^b	0.4
Acute lymphocytic	52.8	0.9 ^b	2.2 ^b	0.3 ^c	45.2	0.8 ^b	2.4 ^b	0.3 ^c
Non-Hodgkin lymphoma	-0.3	0.3	0.0	0.9	12.0	0.8 ^b	1.4	1.0
Soft tissue	32.4	1.3 ^b	1.4	2.6 ^b	37.6	1.3 ^b	2.1	2.6 ^b

^a The APC is the Annual Percent Change over the time interval.

^b SEER 9 areas.

^c The APC is significantly different from zero ($p < .05$)

^d The APC for 1987-2001 is significantly different from the APC for 1975-1986 ($p < .05$).

^e The APC for 1987-2001 is significantly different from the APC for 1975-1986 ($p < .10$).

- Statistic could not be calculated.

Table XXVII-2

AGE-ADJUSTED CANCER U.S. MORTALITY TRENDS, 1975-2001, 1975-1986, 1987-2001^a

By Race and Primary Cancer Site

Males and Females

Site	Ages 0-14				Ages 0-19			
	% Change 1975-2001	APC 1975-2001	APC 1975-1986	APC 1987-2001	% Change 1975-2001	APC 1975-2001	APC 1975-1986	APC 1987-2001
<u>All Races</u>								
All Sites	-49.4	-2.8 ^b	-2.9 ^b	-2.5 ^b	-46.4	-2.6 ^b	-2.7 ^b	-2.2 ^{bd}
Bone & Joint	-35.0	-2.1 ^b	-2.9 ^b	0.2 ^c	-32.6	-1.8 ^b	-2.7 ^b	0.4 ^c
Brain & Other nervous	-31.0	-1.2 ^b	-1.3 ^b	-1.3 ^b	-30.4	-1.2 ^b	-1.3 ^b	-1.3 ^b
Hodgkin lymphoma	-75.1	-4.9 ^b	-5.1 ^b	-3.3	-68.8	-4.5 ^b	-3.2 ^b	-4.7 ^b
Kidney & Renal pelvis	-45.6	-3.1 ^b	-3.6 ^b	-1.4 ^d	-42.8	-2.8 ^b	-3.4 ^b	-1.1 ^d
Leukemia	-61.2	-3.9 ^b	-4.6 ^b	-3.6 ^{bc}	-55.6	-3.4 ^b	-4.0 ^b	-3.2 ^{bc}
Acute lymphocytic	-70.3	-4.9 ^b	-4.9 ^b	-4.1 ^b	-62.8	-4.2 ^b	-4.1 ^b	-3.6 ^{bc}
Non-Hodgkin lymphoma	-81.7	-5.2 ^b	-4.4 ^b	-6.4 ^b	-71.7	-4.1 ^b	-3.8 ^b	-4.8 ^b
Soft tissue	6.2	-1.4 ^b	0.6	-2.7 ^{bc}	5.6	-0.6 ^b	0.9	-1.8 ^{bc}
<u>Whites</u>								
All Sites	-49.4	-2.8 ^b	-3.0 ^b	-2.5 ^b	-46.4	-2.6 ^b	-2.7 ^b	-2.2 ^{bd}
Bone & Joint	-29.9	-2.0 ^b	-2.4 ^b	-0.1 ^c	-26.0	-1.6 ^b	-2.2 ^b	0.3 ^c
Brain & Other nervous	-28.5	-1.1 ^b	-1.0 ^b	-1.2 ^b	-27.6	-1.1 ^b	-1.0 ^b	-1.2 ^b
Hodgkin lymphoma	-71.0	-5.5 ^b	-6.3 ^b	-4.0	-67.2	-4.7 ^b	-3.8 ^b	-5.0 ^b
Kidney & Renal pelvis	-53.7	-3.2 ^b	-4.1 ^b	-2.3 ^b	-52.9	-3.0 ^b	-3.6 ^b	-2.1 ^b
Leukemia	-62.5	-4.0 ^b	-4.9 ^b	-3.6 ^{bc}	-56.4	-3.5 ^b	-4.2 ^b	-3.1 ^{bc}
Acute lymphocytic	-71.7	-4.9 ^b	-5.3 ^b	-3.9 ^{bc}	-63.8	-4.3 ^b	-4.3 ^b	-3.4 ^{bd}
Non-Hodgkin lymphoma	-79.5	-5.1 ^b	-4.2 ^b	-6.8 ^{bc}	-72.4	-4.1 ^b	-3.7 ^b	-5.3 ^{bd}
Soft tissue	9.8	-1.4 ^b	1.1	-2.5 ^{bc}	11.9	-0.6	1.5	-1.6 ^{bc}
<u>Blacks</u>								
All Sites	-48.7	-2.6 ^b	-2.3 ^b	-2.3 ^b	-44.6	-2.2 ^b	-2.5 ^b	-2.0 ^b
Bone & Joint	-51.2	-2.4 ^b	-6.2 ^b	1.4 ^c	-53.8	-2.0 ^b	-5.7 ^b	1.8 ^c
Brain & Other nervous	-41.4	-1.4 ^b	-2.2	-1.7 ^b	-41.6	-1.2 ^b	-2.1 ^b	-1.8 ^b
Hodgkin lymphoma	-80.4	-	-2.4	-	-66.2	-3.1 ^b	-0.3	-3.6
Kidney & Renal pelvis	-6.4	-2.7 ^b	-1.6	0.5	-11.5	-2.4 ^b	-2.6	1.0 ^d
Leukemia	-52.6	-3.5 ^b	-2.6 ^b	-2.7 ^b	-48.6	-2.8 ^b	-2.4 ^b	-2.8 ^b
Acute lymphocytic	-58.2	-4.6 ^b	-1.0	-4.6 ^{bc}	-50.0	-3.6 ^b	-1.2	-4.2 ^{bc}
Non-Hodgkin lymphoma	-88.7	-5.4 ^b	-6.1 ^b	-2.9	-61.9	-3.8 ^b	-4.5 ^b	-1.8
Soft tissue	-2.7	-1.4	-0.8	-4.2 ^b	-12.2	-0.7	-1.1	-2.8 ^b

The APC is the Annual Percent Change over the time interval.

^a NCHS public use data file for the total US.

^b The APC is significantly different from zero ($p < .05$).

^c The APC for 1987-2001 is significantly different from the APC for 1975-1986 ($p < .05$).

^d The APC for 1987-2001 is significantly different from the APC for 1975-1986 ($p < .10$).

- Statistic could not be calculated.

Table XXVII-3

AGE-ADJUSTED SEER CANCER INCIDENCE RATES^a, 1975-2001

By Primary Cancer Site

All Races, Males and Females

Year of Diagnosis

Age/Site	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<u>Ages 0-14</u>																							
All Sites																							
All Races	11.5	12.9	12.5	12.9	12.9	13.9	14.5	14.3	14.2	13.5	15.1	14.2	15.1	13.4	14.9	13.9	14.0	14.6	14.0	15.2	14.3	15.3	15.2
Whites	12.0	13.1	12.5	13.1	13.7	14.4	15.6	14.9	14.7	14.0	15.5	14.2	16.1	13.9	15.2	14.4	14.7	14.8	14.8	16.2	15.3	16.6	16.4
Blacks	8.6	11.1	13.2	11.8	10.0	10.3	10.1	10.9	11.6	11.9	13.7	12.3	11.6	12.0	12.5	12.2	11.4	11.3	11.2	9.8	10.2	11.7	10.6
Bone & Joint	0.5	0.7	0.6	0.6	0.7	0.7	0.8	0.7	0.7	0.6	0.6	0.7	0.9	0.5	0.6	0.8	0.8	0.5	0.9	0.6	0.6	0.6	0.6
Brain & Other nervous	2.3	2.8	2.5	2.4	2.2	2.8	3.0	3.5	3.1	3.3	3.2	3.5	3.5	3.2	3.4	3.2	3.3	3.1	2.7	3.1	3.4	3.4	3.7
Hodgkin lymphoma	0.7	0.5	0.6	0.5	0.7	0.7	0.7	0.5	0.6	0.6	0.7	0.6	0.6	0.5	0.6	0.5	0.3	0.6	0.6	0.6	0.4	0.6	0.6
Kidney & Renal pelvis	0.7	0.8	0.9	1.0	1.2	0.7	0.9	0.9	0.9	0.8	1.1	0.8	0.9	0.7	1.0	1.2	0.6	1.0	1.0	1.1	0.7	1.0	0.8
Leukemia	3.3	4.0	4.1	3.8	3.7	4.5	4.6	4.1	4.4	4.1	4.8	4.4	4.6	4.0	4.2	3.7	4.4	4.6	4.2	4.8	4.6	4.6	4.3
Acute lymphocytic	2.2	3.1	3.3	3.0	3.0	3.5	3.5	3.3	3.4	3.3	4.0	3.4	3.5	3.1	3.1	2.9	3.6	3.5	3.5	3.9	3.6	3.5	3.4
Non-Hodgkin lymphoma	1.0	0.7	0.7	0.9	0.9	0.9	0.7	1.0	1.1	0.7	0.7	0.8	0.9	0.8	0.8	1.0	0.9	0.6	0.9	0.9	0.8	1.0	1.0
Soft tissue	0.9	0.9	0.7	0.9	0.9	0.8	0.9	0.9	0.8	0.6	0.9	0.7	1.1	0.7	0.6	0.9	0.9	1.1	1.0	1.1	0.9	1.0	1.1
<u>Ages 0-19</u>																							
All Sites																							
All Races	12.9	14.4	14.0	14.5	14.6	15.5	15.9	15.9	15.4	15.2	16.6	15.6	16.3	16.0	16.2	15.5	15.7	16.1	15.6	16.3	15.5	16.8	16.5
Whites	13.4	14.8	14.3	15.1	15.5	16.2	17.1	16.6	16.3	15.7	17.2	15.9	17.5	16.8	16.6	16.1	16.6	16.4	16.8	17.4	16.5	18.1	17.9
Blacks	10.8	11.0	13.0	11.8	11.2	12.2	10.6	12.5	11.3	12.9	14.0	13.2	12.3	12.3	13.1	12.8	12.1	12.4	11.1	11.3	10.9	12.7	10.9
Bone & Joint	0.7	0.9	1.0	0.8	0.8	0.9	1.0	0.9	1.0	0.8	0.9	0.8	1.0	0.9	0.8	1.0	0.9	0.7	1.2	0.8	0.7	0.8	0.9
Brain & Other nervous	2.1	2.5	2.3	2.3	2.2	2.6	2.7	3.2	2.9	3.0	3.0	3.2	3.0	3.3	3.0	2.8	3.0	3.0	2.5	2.7	2.9	3.1	3.2
Hodgkin lymphoma	1.5	1.2	1.3	1.5	1.4	1.5	1.4	1.3	1.4	1.3	1.7	1.3	1.4	1.4	1.3	1.3	0.9	1.4	1.3	1.4	1.1	1.1	1.1
Kidney & Renal pelvis	0.5	0.6	0.7	0.7	0.9	0.6	0.7	0.7	0.7	0.6	0.9	0.6	0.7	0.6	0.8	0.9	0.5	0.7	0.8	0.8	0.6	0.8	0.6
Leukemia	3.0	3.5	3.7	3.4	3.5	4.0	4.0	3.7	3.7	3.6	4.2	3.8	4.1	3.7	3.7	3.4	3.9	3.9	3.7	4.1	4.0	4.1	3.8
Acute lymphocytic	1.9	2.5	2.7	2.6	2.6	3.0	2.9	2.8	2.7	2.7	3.4	2.9	3.0	2.6	2.6	2.5	3.1	2.9	2.9	3.3	2.9	3.0	2.8
Non-Hodgkin lymphoma	1.0	0.9	1.0	1.0	1.1	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.1	1.0	0.9	1.2	1.1	1.0	1.1	1.1	0.9	1.4	1.1
Soft tissue	0.8	0.9	0.7	1.0	1.0	0.8	0.9	0.9	0.9	0.7	0.9	0.8	1.1	0.7	0.7	0.7	1.1	1.0	1.0	1.1	1.0	1.2	1.1

^a SEER 9 areas. Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population by 5-year age groups.

Table XXVII-4

AGE-ADJUSTED CANCER U.S. DEATH RATES^a, 1975-2001

By Primary Cancer Site

All Races, Males and Females

Year of Death

Age/Site	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<u>Ages 0-14</u>																							
All Sites	4.9	4.3	4.2	4.3	4.1	3.7	3.6	3.5	3.4	3.3	3.3	3.1	3.1	3.0	3.0	2.8	2.7	2.6	2.6	2.4	2.5	2.5	2.5
Bone & Joint	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Brain & Other nervous	1.0	0.9	0.9	1.0	0.9	0.8	0.8	0.9	0.7	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.7
Hodgkin lymphoma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kidney & Renal pelvis	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Leukemia	2.1	1.7	1.6	1.6	1.5	1.3	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.8
Acute lymphocytic	1.2	0.9	1.0	0.9	0.8	0.7	0.8	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.4	0.3
Non-Hodgkin lymphoma	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Soft tissue	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
<u>Ages 0-19</u>																							
All Sites	5.1	4.6	4.4	4.5	4.3	3.9	3.8	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.3	3.1	3.0	2.9	2.9	2.7	2.8	2.8	2.8
Bone & Joint	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2
Brain & Other nervous	0.9	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6
Hodgkin lymphoma	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Kidney & Renal pelvis	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Leukemia	2.0	1.8	1.6	1.6	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.0	0.9	1.0	0.8	0.8	0.9	0.9
Acute lymphocytic	1.0	0.9	0.9	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Non-Hodgkin lymphoma	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Soft tissue	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

^a NCHS public use data file for the total US. Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population by 5-year age groups.

Table XXVII-5

AGE-ADJUSTED CANCER U.S. DEATH RATES^a, 1975-2001

By Primary Cancer Site

Whites, Males and Females

Year of Death

Age/Site	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<u>Ages 0-14</u>																							
All Sites	5.0	4.4	4.2	4.3	4.2	3.7	3.7	3.6	3.6	3.3	3.4	3.2	3.2	3.1	3.1	2.8	2.7	2.7	2.7	2.5	2.5	2.6	2.5
Bone & Joint	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Brain & Other nervous	1.0	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.8	0.7
Hodgkin lymphoma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kidney & Renal pelvis	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Leukemia	2.3	1.8	1.7	1.6	1.6	1.4	1.4	1.4	1.4	1.2	1.2	1.1	1.1	1.2	1.1	1.0	1.0	0.9	0.9	0.8	0.8	0.9	0.8
Acute lymphocytic	1.2	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4
Non-Hodgkin lymphoma	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Soft tissue	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
<u>Ages 0-19</u>																							
All Sites	5.3	4.7	4.5	4.6	4.4	4.0	3.9	3.9	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.1	2.9	2.9	2.9	2.8	2.8	2.9	2.8
Bone & Joint	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3
Brain & Other nervous	0.9	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7
Hodgkin lymphoma	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Kidney & Renal pelvis	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Leukemia	2.1	1.8	1.7	1.7	1.6	1.4	1.4	1.4	1.4	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.0	1.0	1.0	0.9	0.9	0.9	0.9
Acute lymphocytic	1.1	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.5	0.4
Non-Hodgkin lymphoma	0.4	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Soft tissue	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

^a NCHS public use data file for the total US. Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population by 5-year age groups.

Table XXVII-6

AGE-ADJUSTED CANCER U.S. DEATH RATES^a, 1975-2001

By Primary Cancer Site

Blacks, Males and Females

Year of Death

Age/Site	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<u>Ages 0-14</u>																							
All Sites	4.5	3.8	4.2	4.0	3.9	3.5	3.3	3.5	3.0	3.2	3.2	3.0	3.0	2.7	2.6	2.8	2.9	2.5	2.5	2.4	2.5	2.3	2.3
Bone & Joint	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1
Brain & Other nervous	0.9	0.9	1.0	0.8	0.8	0.7	0.6	0.9	0.7	1.0	0.8	0.7	0.8	0.7	0.6	0.8	0.8	0.7	0.6	0.7	0.7	0.7	0.6
Hodgkin lymphoma	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kidney & Renal pelvis	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Leukemia	1.6	1.2	1.6	1.5	1.2	1.3	1.2	1.1	1.0	0.9	1.0	0.9	1.0	0.8	0.9	0.8	1.0	0.8	0.7	0.7	0.7	0.5	0.8
Acute lymphocytic	0.8	0.6	0.8	0.7	0.6	0.7	0.7	0.6	0.5	0.4	0.5	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.3
Non-Hodgkin lymphoma	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0
Soft tissue	0.2	0.1	0.3	0.3	0.3	0.2	0.2	0.1	0.3	0.2	0.2	0.3	0.1	0.2	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.2
<u>Ages 0-19</u>																							
All Sites	4.8	4.2	4.5	4.3	3.8	3.7	3.5	3.7	3.6	3.5	3.5	3.4	3.3	3.0	3.1	3.2	3.1	2.9	2.9	2.6	3.0	2.8	2.6
Bone & Joint	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.3	0.2
Brain & Other nervous	0.9	0.8	0.9	0.8	0.7	0.7	0.6	0.8	0.7	0.9	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.5
Hodgkin lymphoma	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Kidney & Renal pelvis	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Leukemia	1.6	1.4	1.5	1.5	1.1	1.3	1.1	1.2	1.2	1.0	1.1	1.0	1.1	0.8	1.0	1.0	1.1	0.8	0.8	0.7	0.8	0.8	0.8
Acute lymphocytic	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.5	0.4	0.3	0.2	0.3	0.3	0.3
Non-Hodgkin lymphoma	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2
Soft tissue	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.2

^a NCHS public use data file for the total US. Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population by 5-year age groups.

Table XXVII-7

AGE-ADJUSTED SEER CANCER INCIDENCE^a AND U.S. DEATH^b RATES, 1997-2001

By Primary Cancer Site

All Races, Males and Females

Site	Ages 0-14						Ages 0-19					
	Incidence			Mortality			Incidence			Mortality		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites												
All Races	14.8	15.5	14.1	2.5	2.7	2.3	16.1	16.8	15.4	2.8	3.1	2.5
Whites	15.9	16.4	15.3	2.6	2.7	2.4	17.3	17.9	16.8	2.8	3.1	2.5
Blacks	10.7	11.3	10.1	2.4	2.6	2.2	11.4	12.0	10.7	2.8	3.1	2.5
Bone & Joint	0.7	0.8	0.6	0.1	0.1	0.1	0.9	1.1	0.7	0.2	0.3	0.2
Brain & Other nervous	3.3	3.5	3.1	0.7	0.7	0.7	2.9	3.1	2.7	0.7	0.7	0.6
Hodgkin lymphoma	0.6	0.6	0.5	0.0	0.0	0.0	1.2	1.1	1.3	0.0	0.0	0.0
Kidney & Renal pelvis	0.9	0.8	1.0	0.1	0.1	0.1	0.7	0.7	0.8	0.1	0.1	0.1
Leukemia	4.5	4.8	4.2	0.8	0.9	0.7	4.0	4.2	3.7	0.9	1.0	0.8
Acute lymphocytic	3.6	3.8	3.4	0.4	0.4	0.3	3.0	3.2	2.8	0.4	0.5	0.3
Non-Hodgkin lymphoma	0.9	1.3	0.6	0.1	0.1	0.1	1.1	1.5	0.7	0.1	0.2	0.1
Soft tissue	1.0	1.0	1.0	0.1	0.1	0.1	1.1	1.1	1.0	0.2	0.2	0.2

^a SEER 9 areas. Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population by 5-year age groups.

^b NCHS public use data file for the total US. Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population by 5-year age groups.

Table XXVII-8

5-YEAR RELATIVE SURVIVAL RATES (Percent)

By Selected Primary Cancer Site and Year of Diagnosis

All Races, Males and Females

Site	Ages 0-14							
	1974-1976	1977-1979	1980-1982	1983-1985	1986-1988	1989-1991	1992-1994	1995-2000
All Sites								
All Races	55.9	61.5	65.0	67.7	70.5	73.4	77.1	78.5 ^a
Whites	56.0	61.9	65.4	69.3	71.7	74.6	78.4	80.1 ^a
Blacks	56.8	58.2	61.6	57.5	63.2	66.1	74.3	71.9 ^a
Bone & Joint	55.2 ^b	52.2 ^b	54.0 ^b	56.6 ^b	63.4 ^b	62.2	74.6	73.3 ^a
Brain & ONS	54.8	56.1	55.5	61.7	63.3	62.5	67.8	72.6 ^a
Hodgkin lymphoma	78.3	83.5	91.0	89.6	89.9	94.1	94.1	96.0 ^a
Leukemia	45.2	59.4	62.5	61.0	70.2	72.9	76.0	79.3 ^a
Acute lymphocytic	53.2	67.2	71.1	69.2	78.2	80.3	83.6	85.2 ^a
Acute myeloid	14.3	26.4 ^b	24.7 ^b	30.1 ^b	33.0 ^b	36.4	45.5 ^b	52.7 ^a
Neuroblastoma	52.6	53.1	53.1	55.2	59.7	67.9	70.5	65.8 ^a
Non-Hodgkin lymphoma	45.1	50.2	61.0	71.0	69.7	75.2	79.7	85.1 ^a
Soft tissue	60.4	68.3	65.4	76.3	66.8	78.0	74.9	75.2 ^a
Wilms' tumor	74.4	77.5	86.4	86.5	90.8	92.7	92.7	92.0 ^a

Site	Ages 0-19							
	1974-1976	1977-1979	1980-1982	1983-1985	1986-1988	1989-1991	1992-1994	1995-2000
All Sites								
All Races	58.6	64.1	66.7	69.8	73.0	74.5	76.9	78.9 ^a
Whites	58.9	64.5	67.5	71.4	74.6	76.3	78.3	80.4 ^a
Blacks	57.1	61.1	61.6	59.1	63.4	65.0	72.6	71.8 ^a
Bone & Joint	51.2	50.0	50.3	52.4	62.2	64.3	68.3	68.7 ^a
Brain & ONS	55.7	56.5	57.0	63.2	65.9	64.7	68.8	73.3 ^a
Hodgkin lymphoma	84.8	88.1	87.1	88.2	89.3	93.6	91.8	96.1 ^a
Leukemia	40.9	53.8	57.8	58.3	65.9	69.5	71.0	75.8 ^a
Acute lymphocytic	49.3	62.9	67.3	66.7	75.3	77.3	80.6	82.7 ^a
Acute myeloid	16.9	25.3	24.1	33.6	32.1	38.9	41.0	49.5 ^a
Neuroblastoma	52.2	53.1	53.3	54.5	59.0	66.6	70.6	65.8 ^a
Non-Hodgkin lymphoma	43.9	49.5	58.8	66.9	73.2	70.7	77.0	79.7 ^a
Soft tissue	61.8	64.9	65.1	74.5	68.5	69.3	72.8	72.1 ^a
Wilms' tumor	73.6	77.1	85.8	86.8	90.9	92.1	92.7	92.1 ^a

Rates are from the SEER 9 areas. They are based on data from population-based registries in Connecticut, New Mexico, Utah, Iowa, Hawaii, Atlanta, Detroit, Seattle-Puget Sound and San Francisco-Oakland. Rates are based on follow-up of patients into 2001.

^a The difference in rates between 1974-1976 and 1995-2000 is statistically significant ($p < .05$).

^b The standard error of the survival rate is between 5 and 10 percentage points.

^c The standard error of the survival rate is greater than 10 percentage points.

Table XXVII-9

CHILDHOOD CANCER
SEER Incidence, U.S. Death and 5-Year Relative Survival Rates
For Top Cancer Sitesⁱ By 5-Year Age Groups
All Races, Males and Females

Age/Site	SEER Incidence ^a					US Mortality ^b					Survival ^a	
	1997-2001 Num Cases	1997-2001 Rate	1975-2001 APC	1975-1986 APC	1987-2001 APC	1997-2001 Num Deaths	1997-2001 Rate	1975-2001 APC	1975-1986 APC	1987-2001 APC	1974-1976	1995-2000
Ages 0-4												
All Sites	1,888	20.4	0.8 ^c	1.4 ^c	0.4	2,456	2.6	-2.9 ^c	-2.6 ^c	-2.6 ^c	56.7	78.3 ^e
Soft tissue	127	1.4	0.4	1.7	0.8	129	0.1	-2.0 ^c	-0.1	-3.1 ^c	56.9 ^g	76.7 ^f
Kidney and Renal pelvis	190	2.1	0.3	-0.2	0.3	109	0.1	-3.9 ^c	-6.3 ^c	-0.2 ^d	74.2	89.0 ^f
Eye and Orbit	126	1.4	0.9	2.8	0.7	31	0.0	-3.7 ^c	-2.7	-5.0 ^c	89.7	97.1
Brain and Other nervous	359	3.9	1.5 ^c	4.3 ^c	0.3 ^d	623	0.6	-1.2 ^c	-1.1	-1.3 ^c	51.4	68.0 ^f
Other endocrine	129	1.4	-	-	-	406	0.4	-	-	-	32.8 ^g	61.0 ^f
Leukemia	671	7.3	0.7 ^c	0.9	0.4	802	0.8	-3.3 ^c	-4.3 ^c	-2.5 ^{cd}	51.2	83.1 ^e
Acute lymphocytic	545	5.9	0.8 ^c	1.5 ^c	0.3	267	0.3	-5.0 ^c	-6.1 ^c	-3.6 ^{cd}	58.4	89.1 ^f
Ages 5-9												
All Sites	1,104	11.4	0.4	0.9	-0.1	2,525	2.5	-3.2 ^c	-3.5 ^c	-3.0 ^c	55.4	78.3 ^e
Brain and Other nervous	300	3.1	0.4	1.5	-0.7	850	0.8	-1.0 ^c	-0.8	-1.6 ^c	54.6	73.5 ^e
Leukemia	375	3.9	0.8 ^c	0.4	-0.3	742	0.7	-5.3 ^c	-6.0 ^c	-5.3 ^c	46.7	80.2 ^f
Acute lymphocytic	323	3.3	1.1 ^c	2.1	0.6	397	0.4	-6.1 ^c	-6.2 ^c	-5.1 ^c	53.8	83.5 ^f
Ages 10-14												
All Sites	1,228	12.9	0.9 ^c	1.5 ^c	0.9 ^c	2,552	2.5	-2.4 ^c	-2.5 ^c	-1.9 ^{ce}	55.1	79.1 ^e
Bone and Joint	125	1.3	0.3	3.1	-1.1 ^d	285	0.3	-1.7 ^c	-2.4 ^c	0.9 ^d	54.4 ^g	73.7 ^f
Brain and Other nervous	270	2.8	1.6 ^c	-1.4	0.9	674	0.7	-1.4 ^c	-2.2 ^c	-0.9	58.7	78.0 ^f
Hodgkin lymphoma	118	1.2	-0.7 ^c	-1.1	-0.7	35	0.0	-4.2 ^c	-3.7	-2.5	75.0 ^g	94.9 ^e
Leukemia	240	2.5	0.5	4.9 ^c	0.5 ^d	895	0.9	-3.1 ^c	-3.1 ^c	-2.9 ^c	28.8	67.1 ^f
Acute lymphocytic	156	1.6	0.7	4.9 ^c	-0.8 ^d	434	0.4	-3.5 ^c	-2.1 ^c	-3.4 ^c	37.2 ^g	74.6 ^f
Ages 15-19												
All Sites	1,855	20.0	0.5 ^c	1.5 ^c	0.0 ^d	3,644	3.7	-2.0 ^c	-2.3 ^c	-1.6 ^{cd}	63.9	79.6 ^e
Bone and Joint	139	1.5	0.4	1.5	-0.4	526	0.5	-1.5 ^c	-2.5 ^c	0.5 ^d	46.6 ^g	62.7 ^f
Melanoma of the skin	124	1.3	0.9	0.8	-1.0	48	0.0	-3.0 ^c	-4.0 ^c	-4.1	76.7 ^g	94.4 ^e
Testis(males)	157	3.3	1.3 ^c	3.7	2.0	36	0.1	-7.6 ^c	-10.8 ^c	-5.0 ^{cd}	55.3 ^g	91.9 ^e
Brain and Other nervous	172	1.9	0.3	1.0	-1.5	545	0.5	-1.2 ^c	-1.1	-1.3 ^c	58.9 ^g	77.1 ^f
Thyroid	165	1.8	1.2 ^c	1.6	1.4	-	-	-	-	-	100.0	99.5
Hodgkin lymphoma	291	3.1	-0.7 ^c	0.3	-2.0 ^{ce}	117	0.1	-4.3 ^c	-2.5	-5.1 ^c	88.4	96.1 ^e
Non-Hodgkin lymphoma	152	1.6	1.8 ^c	4.4 ^c	1.1	289	0.3	-2.6 ^c	-2.7 ^c	-3.0 ^c	40.6 ^g	71.8 ^f
Leukemia	216	2.3	0.3	1.1	0.8	1,110	1.1	-2.1 ^c	-2.0 ^c	-2.1 ^c	21.5	53.6 ^f
Acute lymphocytic	111	1.2	0.6	3.8 ^c	0.3 ^e	471	0.5	-2.0 ^c	-0.5	-2.3 ^c	21.3 ^g	60.1 ^{fg}

The APC is the Annual Percent Change over the time interval.

Note: Incidence and death rates are per 100,000. Survival rates are expressed as percents.

^a SEER 9 areas.

^b NCHS public use data file for the total US.

^c The APC is significantly different from zero (p<.05).

^d The APC for 1987-2001 is significantly different from the APC for 1975-1986 (p<.05).

^e The APC for 1987-2001 is significantly different from the APC for 1975-1986 (p<.10).

^f The difference in rates between 1974-1976 and 1995-2000 is statistically significant (p<.05).

^g The standard error of the survival rate is between 5 and 10 percentage points.

^h The standard error of the survival rate is greater than 10 percentage points.

ⁱ Sites were chosen based on more than 100 SEER incident cases between 1997-2001.

- Statistic could not be calculated.

Table XXVII-10
ALL SITES (Invasive)

SURVIVAL RATES^a

By Year of Diagnosis

All Races, Males and Females

Ages 0-14

Year of Diagnosis

	1975- 1979	1980- 1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Relative Survival Rates (SEER ^b)																		
1-year	81.4	85.0	87.2	85.6	86.0	88.7	88.5	89.3	90.9	91.1	88.5	90.5	90.4	92.8	91.2	91.0	91.2	92.0
2-year	71.1	75.7	78.2	76.1	77.1	80.3	79.9	81.7	82.2	84.0	82.0	84.5	84.6	86.2	84.9	84.1	84.7	
3-year	65.4	70.6	73.8	72.3	72.8	76.6	75.6	77.3	78.8	80.9	78.5	81.4	81.0	83.5	82.4	81.2		
4-year	62.0	67.4	70.6	71.0	70.8	73.4	73.1	75.0	76.0	78.6	77.7	78.7	78.4	80.5	80.6			
5-year	59.8	65.7	69.7	68.7	70.2	72.5	71.6	73.9	74.8	77.4	76.0	78.1	76.9	80.1				
6-year	58.1	64.5	68.4	67.8	68.9	72.1	70.6	73.1	74.3	76.0	75.5	77.8	75.7					
7-year	57.0	63.5	67.2	67.7	67.7	71.2	69.1	72.1	73.9	75.7	75.0	76.9						
8-year	56.3	62.8	66.1	67.4	67.7	70.6	68.2	71.7	73.1	75.6	74.3							
9-year	55.9	62.2	65.5	66.8	67.4	70.3	67.8	71.2	72.7	75.5								
10-year	55.6	61.7	64.6	66.7	66.8	70.0	67.2	70.7	72.6									
11-year	55.3	61.4	63.9	66.7	66.5	69.9	67.0	70.1										
12-year	54.9	60.8	63.6	66.0	66.4	69.6	66.7											
13-year	54.8	60.5	63.3	65.7	66.0	69.1												
14-year	54.4	60.2	63.2	64.4	66.0													
15-year	54.1	59.8	62.9	64.4														
16-year	53.7	59.5	62.8															
17-year	53.3	59.3																
18-year	53.1																	
19-year	52.8																	
20-year	52.6																	

^a Survival rates are relative rates expressed as percents.
^b Rates are from the SEER 9 areas.

Table XXVII-11
ALL SITES (Invasive)

SURVIVAL RATES^a

By Year of Diagnosis

All Races, Males and Females

Ages 0-19

Year of Diagnosis

	1975- 1979	1980- 1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
Relative Survival Rates (SEER ^b)																			
1-year	83.0	86.3	87.9	88.0	88.1	89.9	89.5	90.4	91.4	90.4	89.8	90.7	90.1	93.1	91.6	92.1	91.1	90.6	
2-year	73.1	77.3	78.8	78.9	79.9	82.3	81.2	82.9	83.4	83.3	82.7	84.1	84.6	87.2	85.2	85.2	85.1		
3-year	68.0	72.3	75.3	75.5	75.7	78.1	77.2	78.4	79.6	80.2	79.4	80.6	81.3	84.9	81.9	82.4			
4-year	64.7	69.3	72.5	73.9	73.2	75.3	74.0	76.0	77.4	78.0	78.0	78.5	79.5	81.9	80.3				
5-year	62.7	67.6	71.6	72.0	72.5	74.5	72.7	74.7	76.1	76.8	76.3	77.8	78.1	81.3					
6-year	61.0	66.2	70.4	71.4	71.4	73.9	71.6	73.7	75.5	75.4	75.8	77.3	76.9						
7-year	60.0	65.4	69.2	71.0	70.3	73.0	70.6	72.8	74.9	75.0	75.3	76.6							
8-year	59.2	64.6	68.4	70.7	69.9	72.0	69.9	72.1	74.2	74.8	74.4								
9-year	58.7	63.9	67.8	70.1	69.3	71.8	69.4	71.6	73.8	74.7									
10-year	58.4	63.4	67.0	69.7	68.9	71.2	69.1	71.3	73.4										
11-year	58.0	63.1	66.3	69.6	68.7	71.2	68.9	70.6											
12-year	57.6	62.6	66.1	69.1	68.5	70.9	68.6												
13-year	57.5	62.2	65.7	68.5	68.2	70.6													
14-year	57.1	61.9	65.5	67.2	67.7														
15-year	56.9	61.5	65.4	67.0															
16-year	56.5	61.0	64.9																
17-year	56.2	60.8																	
18-year	55.9																		
19-year	55.7																		
20-year	55.3																		

^a Survival rates are relative rates expressed as percents.
^b Rates are from the SEER 9 areas.

Table XXVII-12
 CHILDHOOD CANCER (Invasive, <20 Years old at diagnosis)

Estimated United States Cancer Prevalence Counts^a on January 1, 2001
 By Race/Ethnicity, Sex and Years Since Diagnosis

Years Since Diagnosis	0 to <5	5 to <10	10 to <15	15 to <20	20 to <25	0 to <11 ^e	0 to <26 ^e	>=26 ^f	Complete ^g
<u>Race/Sex</u>									
All Races ^b	54,418	45,273	38,363	32,455	28,901	107,593	204,131	+	+
Males	28,817	23,755	20,104	16,244	13,509	57,026	104,636	+	+
Females	25,601	21,518	18,259	16,211	15,392	50,567	99,495	+	+
White ^b	45,606	37,927	32,874	28,432	25,519	90,272	174,485	+	+
Males	24,091	20,001	17,353	14,394	12,004	47,985	89,833	+	+
Females	21,515	17,926	15,521	14,038	13,515	42,287	84,652	+	+
Black ^b	5,708	4,948	3,684	2,804	2,392	11,380	19,946	+	+
Males	3,026	2,485	1,762	1,294	1,046	5,848	9,760	+	+
Females	2,682	2,463	1,922	1,510	1,346	5,532	10,186	+	+
Asian/Pacific Islander ^c	1,811	1,410	+	+	+	3,497	+	+	+
Males	988	689	+	+	+	1,828	+	+	+
Females	823	721	+	+	+	1,669	+	+	+
Hispanic ^d	8,073	5,728	+	+	+	14,784	+	+	+
Males	4,270	3,137	+	+	+	8,000	+	+	+
Females	3,803	2,591	+	+	+	6,784	+	+	+

^a US 2001 cancer prevalence counts are based on 2001 cancer prevalence proportions from the SEER registries and 1/1/2001 US population estimates based on the average of 2000 and 2001 population estimates from the US Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

^{b c d} Statistics based on b) SEER 9 Areas c) SEER 11 Areas d) SEER 11 Areas excluding Hawaii and Detroit.

^e Maximum limited-duration prevalence: 26 years for 1975-2001 SEER 9 data; 11 years for 1990-2001 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

^{f g} (f) Cases diagnosed 26 years or more ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000). (g) Complete prevalence is obtained by summing 0 to <26 and >=26.

- Statistic not shown. Statistic based on fewer than 5 cases estimated alive in SEER for the time interval.

+ Not available.